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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,963	09/27/2000	Daoqiang Lu	GTRC40	1376

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE REFILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/671,963

Applicant(s)

LU ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 13 January 2003 and 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 15-18 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) 17, 21-29 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 15, 16, 18, 30 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

This is responsive to the Request for Continued Examination and amendment filed January 13, 2003 (Paper Nos. 18 and 19, respectively) as well as the election filed April 1, 2003 (Paper No. 22).

The election with traverse of Group III in Paper No. 22 is acknowledged. The traversal is on the grounds that Group IV should be examined along with Group III since the claims of Group IV are dependent upon those of Group III and would be patentable if the claims of Group III were found to be patentable. This is not found persuasive because the separate classification of the Group III and IV establishes an undue search burden. The mere dependency of claims is not a sufficient basis for confirming the lack of distinctness between the inventions.

The requirement is still deemed proper and is therefore made FINAL.

Claims 17, 21-29 and 32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to non-elected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in Paper No. 22.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 15, 16, 18, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuri et al., Saito et al. Patent No. 5,194,502, Lohse and Japanese Patent Nos. 60-206882, 60-235877 and 49-97052 in view of (Eadara and the Vincent et al. article) and Wang et al. and Soviet Union Patent No. 1,628,508.

The rejection with respect to Okuri et al., Saito et al. '502, Lohse and Japanese '882, '877 and '052 in view of Eadara and the Vincent et al. article is maintained for the reasons of record set forth in the previous Office actions.

Wang et al. and the Soviet Union patent are added in response to the claims requiring the joining of electrically conductive materials (claim 15, line 1). Wang et al. (col. 1, lines 14-20 and col. 2, lines 51-64) and the Soviet Union patent set forth the use of formulations prepared from epoxide-modified polyurethanes, crosslinking agents and conductive fillers as an encapsulant which connects semiconductor devices to printed circuit boards (Wang et al., col. 1, lines 14-17) and an electroconducting adhesive for assembling semiconductor devices and integrated circuits (Soviet Union patent abstract, Use section).

Okuri et al., Saito et al. '502, Lohse and Japanese '882, '877 and '052 are open directed to adhesives containing epoxide-modified polyurethanes, crosslinking agents and conductive fillers which are common to the compositions of Wang et al. and the Soviet Union patent.

It would have been obvious to utilize the adhesives of Okuri et al., Saito et al. '502, Lohse and Japanese '882, '877 and '052 to bond particular materials such as a semiconductor device to a printed circuit board as per Wang et al. and the Soviet Union patent in order to optimize the adhesive strength.

Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al., Japanese Patent No. 50-352232, the Soviet Union patent and Saito et al. Patent No. 4,845,136 in view of Eadara et al. and Vincent et al.

The claims 15 and 18 do not require the epoxide-modified polyurethane having the structure depicted in claims 16 and 30.

Wang et al. and the Soviet Union patents disclose the use of their compositions as electroconductive adhesives connecting semiconductor devices to printed circuit boards. Japanese '232 and Saito et al. '136 employ blends of epoxide-modified polyurethanes, crosslinking agents and conductive fillers as adhesives.

It would have been obvious to use the adhesives of Japanese '232 and Saito et al. '136 to bond particular materials such as a semiconductor device to a printed circuit board as per Wang et al. and the Soviet Union patent in order to optimize the adhesive strength.

Claims 16, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Soviet Union patent in view of Okuri et al., Lohse and Japanese '052.

Claims 16, 30 and 31 require the epoxide-modified polyurethane to possess the depicted structure. The Soviet Union patent sets forth an oligo-ether-urethane-diepoxyde without revealing its structure. It would have been obvious to employ the epoxide-modified polyurethane of Okuri et al., Lohse and Japanese '052 as the oligo-ether-urethane-diepoxyde of the Soviet Union patent in order to increase the durability and anti-corrosion (Okuri et al., col. 3, lines 44-47), impart elasticity (Lohse, col. 1, lines 7-8) and improve the bonding strength (Japanese '052, the last two lines of the abstract).

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rs  
5/2/03